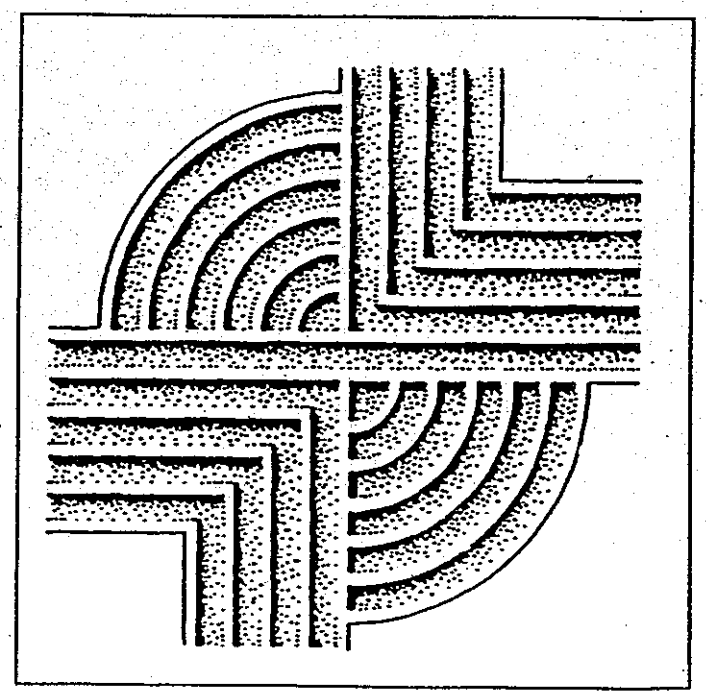
ARCHAEOLOGICAL SURVEY OF THE RAVENEL TAP CORRIDOR, CHARLESTON AND DORCHESTER COUNTIES, SOUTH CAROLINA



RESEARCH CONTRIBUTION 308

ARCHAEOLOGICAL SURVEY OF THE RAVENEL TAP, CHARLESTON AND DORCHESTER COUNTIES, SOUTH CAROLINA

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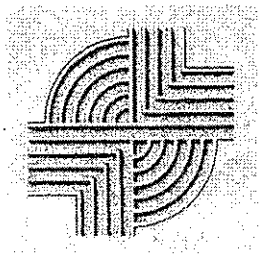
CHICORA RESEARCH CONTRIBUTION 308



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ABSTRACT

This study reports on an intensive archaeological survey of the 1,400 foot long Ravenel Tap corridor running north from an existing powerline south of County Line Road (S-317) in Charleston County and the associated 6 acres substation lot situated on Tannenbaum Road (S-724) in adjacent Dorchester County. The project area is situated about 10 miles west of Charleston, South Carolina.

The proposed corridor is 75 feet in width and individual wood poles will be used to connect the existing 200-foot wide corridor with two sets of double wood towers to a new substation, measuring about 650 feet east-west by 500 feet north-south (although only the eastern portion of this substation will be initially used).

The survey area consists of very level, generally poorly drained soils. Much of survey corridor is classified as swamp and standing water was encountered during the survey. The substation tract is somewhat higher in elevation.

Consultation with the S.C. Department of Archives and History revealed no National Register properties in the immediate area. Both the Dorchester and Charleston architectural surveys were also examined. One structure, 3780724, had been identified within a 1-mile area of potential effects (APE) for the project. This structure, is a ca. 1940 lateral gable house with a front gable porch. It has been extensively altered and the State Historic Preservation Office previously determined the structure not eligible. Additional survey during this project failed to identify any additional architectural resources.

Likewise, an investigation of the site files at the S.C. Institute of Archaeology and Anthropology revealed no archaeological sites within a mile of the project.

Although much of the corridor is low and poorly drained, we chose to conduct shovel testing at 100-foot intervals. All fill was screened through ¼-inch mesh and the shovel tests were backfilled at the completion of the study. At the time of the survey the substation lot had been cleared and provided excellent surface visibility. Nevertheless, this area was also subjected to shovel testing at 100-foot intervals.

The only artifact encountered was a single fragment of whiteware found on the substation tract. Classified as an isolated find, this material is not considered significant and no further management activities are recommended.

In spite of this intensive survey it always remains possible that archaeological materials may be encountered on the corridor or tract during construction. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points), brick rubble, or bones of any type to the project engineer, who should in turn report the material to the State Historic Preservation Office or to Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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INTRODUCTION

Project Background

This work was conducted for Mr. Robert Kidd, Central Electric Power Cooperative by Dr. Michael Trinkley, with assistance from Mr. Tom Covington, of Chicora Foundation. The project involves the historical and archaeological survey of the 1,400 foot long, 75-foot wide Ravenel 115kV tap line and the associated 6 acres substation lot. The project extends from Charleston County across County Line Road (S-317) into Dorchester County, terminating at the substation lot on Tannenbaum Road (S-724) (Figures 1 and 2).

The survey corridor begins at an existing powerline easement 200-feet in width which contains two sets of lines, each on H-frame wood structures. The centerline begins at Structure 123 and runs northward through a wetland area turning to the west slightly and crossing County Line Road. It terminates at the southern side of the proposed substation lot, a rectangular tract measuring about 500 feet north-south and 650 feet east-west and encompassing about 6 acres. The topography slopes up slightly to the north, placing the substation lot on somewhat higher ground than the corridor, although throughout the area the land is generally flat and low.

This work has the potential for a variety of primary and secondary effects on historic and archaeological sites. The construction of the tap line corridor will involve clearing and setting of new, single wood poles about 60 feet in height, followed by maintenance of the line. The construction of the substation will involve clearing, grubbing, grading, and associated construction of concrete footers for the transformers and other equipment. Primary effects in the construction area include destruction of any resources which might exist as well as siltation or other related damages. Secondary effects to historic structures and resources include the potential for nuisance dust and increased construction traffic. Given the proximity of the existing, much larger and taller, powerlines, it is unlikely that the tap line will have visual intrusion, although the substation lot itself may.

Background research included an examination of records at the S.C. Institute of Archaeology and Anthropology for information on previously recorded archaeological sites in the area, as well as an examination of the files of the S.C. Department of Archives and History for information on previous architectural surveys of the area, as well as for information on National Register sites in the study vicinity. Historical research consisted entirely of the examination of secondary sources and maps that might provide information on significant sites in the region.

The investigation consists of an archaeological survey of the 1,400 foot corridor and associated 6-acre substation using shovel testing at 100 foot intervals. The architectural survey consisted of driving public roads and confirming the results of the previous Charleston and Dorchester County architectural surveys.

The field investigation was conducted by Dr. Michael Trinkley and Mr. Tom Covington on September 26, 2000. A total of 10 person hours were spent on-site conducting the survey.

Natural Environment

The project area is situated in the south central portion of Dorchester County and extends just south into southern Charleston County. The project area is situated in an area of generally low, poorly drained soils. The topography is charactered by ridges of somewhat higher soils with intervening swales or troughs of poorly drained soils.

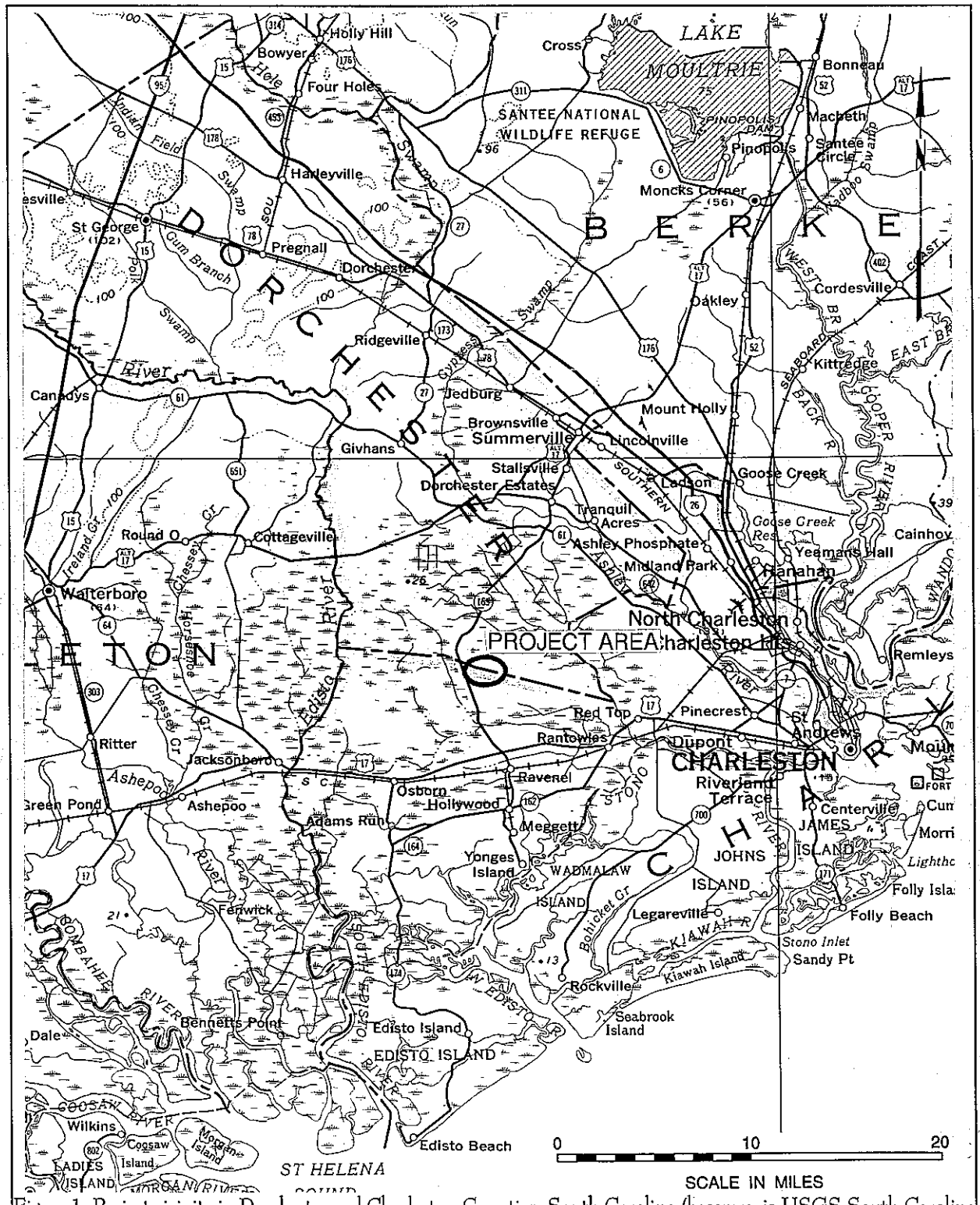

Figure 1. Project vicinity in Dorchester and Charleston Counties, South Carolina (basemap is USGS South Carolina 1:500,000).

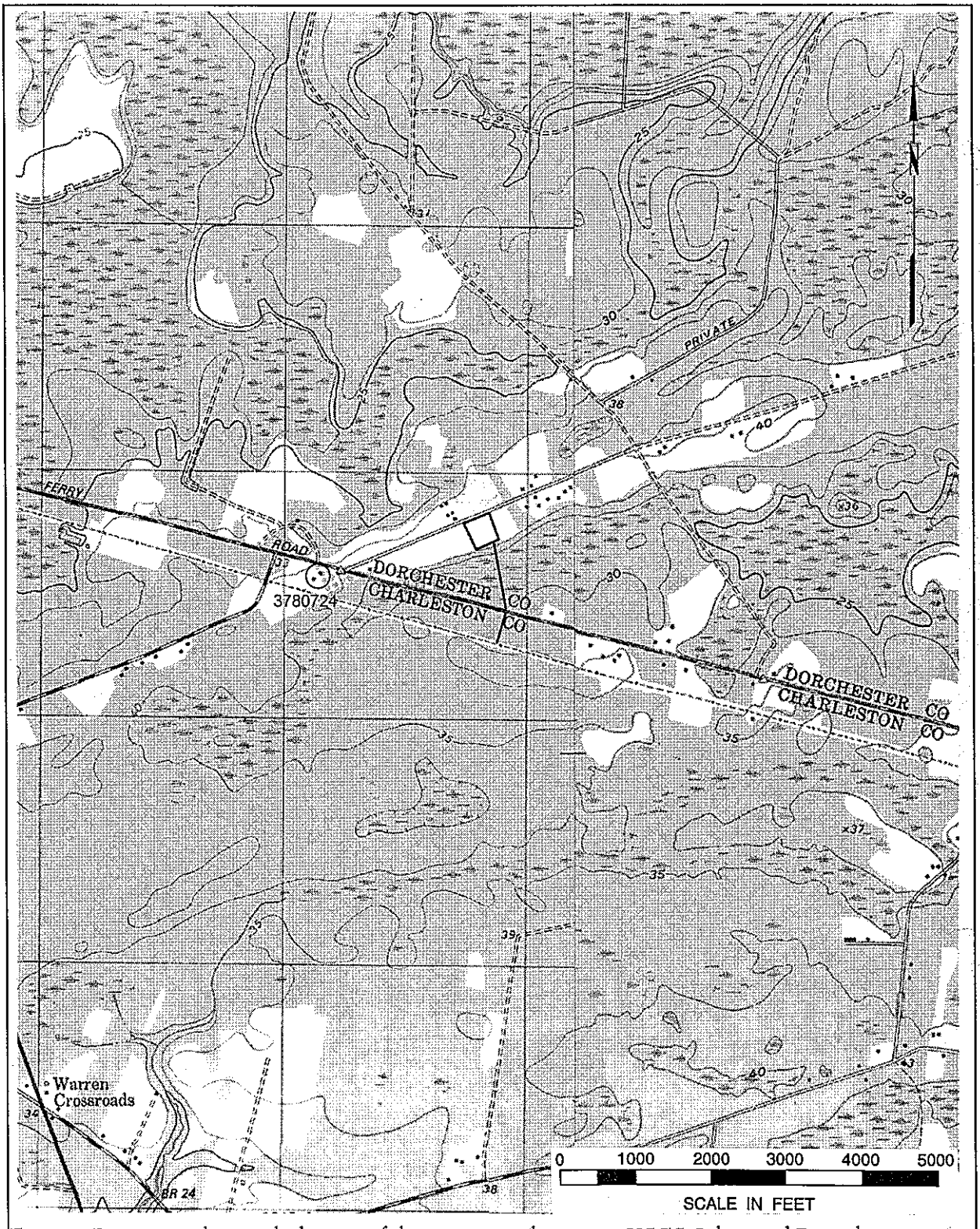

Figure 2. Project area showing the location of the survey tract (basemap is USGS Osborn and Ravenel 1:24,000).

Dorchester County is situated in the Lower Coastal Plain of South Carolina. It is bounded to the north by Orangeburg County, on the east by Berkeley County, on the south by Charleston County, and is separated from Colleton County on the west by the Edisto River. The county is drained by the Edisto and Ashley Rivers, with the project area itself drained by Dorchester Creek, which empties into the Ashley River located south of the project area. Elevations in the county range from about 3 or 4 feet above sea level along parts of the Ashley River to about 120 feet above sea level near Reevesville (Eppinette 1990:1). Elevations in the project area range from about 25 to 35 feet above mean sea level (AMSL).

This portion of the Lower Coastal Plain contains nearly level soils. In a few small areas, primarily along major rivers and swamps, the soils are gently sloping. Less than 1% of the county is flooded daily or occasionally by saline water. All of the soils in the county were deposited or formed during the Pleistocene epoch. During this period, the ocean moved over the area, perhaps several times. As the ocean retreated, it left formations and terraces which indicate former shorelines and soils of different ages. The terraces in Dorchester County, from the sea to the inland, include the Recent, Pamlico, Talbot, Penholoway, Wicomico, and Sunderland. The project area is located in the Pamlico Terrace which ranges from sea level up to 25 feet above sea level (Cooke 1936; Eppinette 1990:89).

Geology and Soils

The geology of the Lower Coastal Plain has been well described by Cooke (1936) who notes that from the Cape Fear River in North Carolina to Winyah Bay in South Carolina, the coast forms a "great arc scooped out by waves" (Cooke 1936:4). This area has been described by Brown (1975) as being an arcuate strand. In this area salt marshes are poorly developed or absent and few tidal inlets breach the coast (Smith 1933:20-21). This situation is the result of an erosional history about 100,000 years ago. In general, however, the geology of the Lower Coastal Plain is less complex than that of other sections of the state.

The area is dominated by fluvial deposits of unconsolidated sands and clays. Rocks are almost totally absent from the area, although Mills (1972 [1826]:584) does note that some compact shell limestone was found on the Waccamaw between Gaul's Ferry and Bear Bluff.

Soils were primarily formed during the Pleistocene epoch and several terraces were deposited (Dudley 1986:85). The project vicinity is characterized by the Mouzon-Brookman-Wahee Association. In general, these soils range from somewhat poorly drained to very poorly drained. They typically have a loamy surface layer over a loamy and clayey subsoil.

Three soil series are found in the survey area. The tap line crosses Brookman clay loams and Nakina fine sandy loams, while the substation lot is situated on Blanton fine sands. The Brookman soils are typical of large drainageways that are often flooded. The A horizon consists of black (10YR2/1) clay loams about 0.7 foot in depth, overlying a black clay to nearly 2 feet. The Nakina soils are likewise formed in drainages or shallow depressions. The A horizon is typically 0.9 foot in depth and consists of black (10YR2/1) fine sandy loam overlying an E horizon of dark gray (10YR4/1) sandy loam to a depth of about 1.5 feet. Below is a gray (10YR5/1) sandy clay to about 3.1 feet. Both the Brookman and Nakina may have water tables from the surface to a foot below the surface. In contrast, the Blanton soils are found on upland terraces and, although nearly level, exhibit good to excessive drainage. These soils have an A or Ap horizon of light brownish gray (10YR6/2) fine sand to a depth of about 0.3 to 0.9 foot. Below may be a brown (10YR5/3) horizon about 0.5 foot in depth where there is no plowing. Otherwise, the Ap horizon rests on a very pale brown (10YR7/3) fine sand to a depth of about 3.7 feet (Eppinette 1990).

Climate

John Lawson described South Carolina in 1700 as having, "a sweet Air, moderate Climate, and fertile Soil" (Lefler 1967:86). Of course, Lawson tended to romanticize Carolina. In December 1740 Robert Pringle remarked that Charleston was having "hard frosts & Snow" characterized as "a great Detriment to the Negroes" (Edgar 1972:282), while in May 1744 Pringle states, "the weather having already

relatively low potential for archaeological and historic sites.

Figure 3. View of vegetation in the survey area, vicinity of Transect 14, Shovel Test 1, looking southwest.

In 1826 Robert Mills commented that soil was rich and productive adjacent to Horry's rivers. Even the uplands were well suited for cotton with their light sandy soil underlaid by clay. But he commented that a great deal of swamp land was found in the district, "fit only for cattle ranges" (Mills 1972 [1826]: 585). Edmund Ruffin, who managed to visit much of South Carolina's coast in the mid-1840s, never sought to go to Horry, commenting that:

> I would have gone to Horry, which is called the "dark corner" of the state, but for having no expectation of finding anyone acquainted with or feeling interested in the objects of explorations (Mathew 1992:215).

Climate

Elevation, latitude, and distance from the coast work close together to affect the climate of South Carolina, although Horry is clearly dominated by its maritime location. Much of the weather is controlled by the proximity of the Gulf Stream, about 50 miles offshore. In addition, the more westerly mountains block or moderate many of the cold air masses that flow across the state from west to east. Even the very cold air masses which cross the mountains are warmed by compression before the descent on the Coast.

Consequently, the climate of Horry County is temperate. The winters are relatively mild with a mean temperature of 48°F and the summers are very warm and humid, with a mean temperature of 79°F and average humidity of 60%. Rainfall in the amount of about 51 inches is good for a broad range of crops. About 31 inches (or 60% of the total) occurs during the growing season, with until relatively recently periods of drought not being particularly common. Of course, there have been state-wide droughts, such as the one in 1845, but more often the threat to Horry crops was flooding. Major floods have occurred in 1855, 1924, 1928, 1959, 1961, and 1973, with the September 1928 flood the largest known, reaching a stage of 12.75 feet above mean sea level (U.S. army Corps of Engineers 1973:9).

The average growing season is about 234 days, although early freezes in the fall and late frosts in the

longleaf pine was "much used in building and for all other domestic purposes;" trees such as the red bay and red cedar were often used in furniture making and cedar was a favorite for posts; and live oaks were recognized as yielding "the best of timber for ship building;" (Mills 1972 [1826]:66-85). Mills also observed that:

> in former years cypress was much used in building, but the difficulty of obtaining it now, compared with the pine, occasions little of it to be cut for sale, except in the shape of shingles; the cypress is a most valuable wood for durability and lightness. Besides the two names we have cedar, poplar, beech, oak, and locust, which are or may be also used in building (Mills 1972 [1826]:460).

Figure 3. Portion of tap line corridor crossing the wet Brookman soils with standing water.

The "Oak and hickory high lands" according to Mills were, "well suited for corn and provisions, also for indigo and cotton" (Mills 1972 [1826]:443). The value of these lands in the mid-1820s was from $10 to $20 per acre, less expensive than the tidal swamp or inland swamp lands (where rice and, with drainage, cotton could be grown).

Also encountered are freshwater palustrine ecosystems, which include all wetland ecosystems, such as the swamps, bays, savannas, pocisins, and creeks where the salinities measure less than 0.5 ppt. These palustrine ecosystems tend to be diverse, although not well studied (Sandifer et al. 1980:295). Many of these freshwater areas are associated with the various troughs scattered across the area — such as the one crossed by the tap line. A number of forest types may be found in the palustrine areas which would attract a variety of terrestrial mammals. The typical vegetation might consist of red maple, swamp tupelo, sweet gum, red bay, cypress, and various hollies. Also expected in these areas would be wading birds and reptiles. It seems likely that these freshwater environs were of particular importance to the prehistoric occupants, but posed only a passing hindrance to the historic plantation owners.

The survey area has experienced a very large degree of disturbance over its history. There is some evidence that much of this area was never intensively cultivated, but was left in woods for most of its colonial and antebellum history. In the postbellum, however,

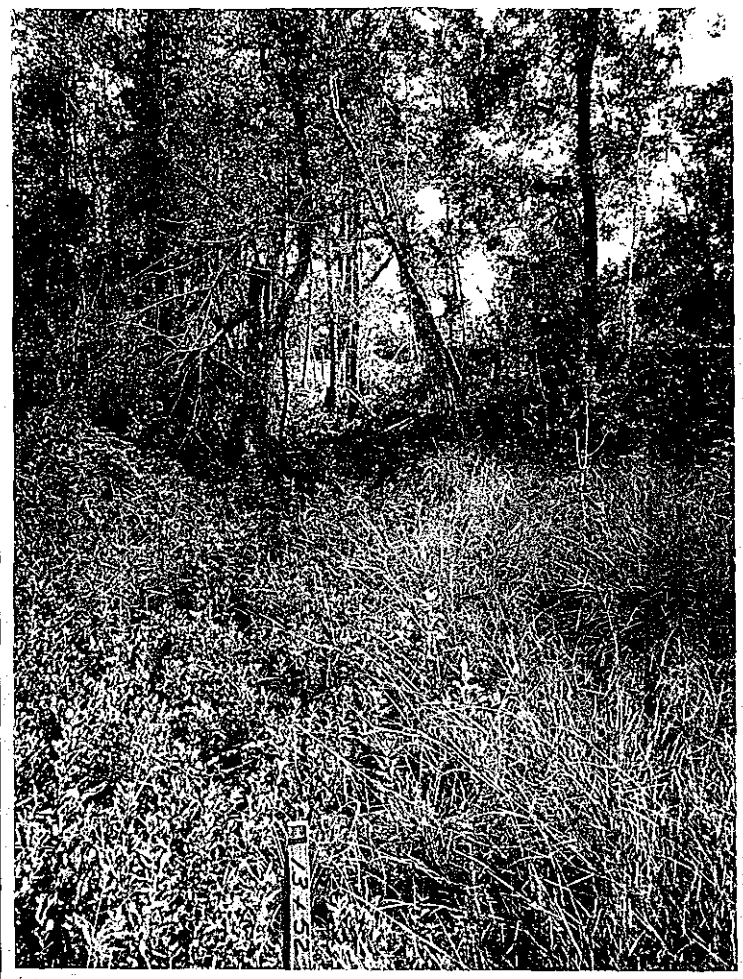

Figure 4. View of the corridor as it enters the Nakina soils south of the substation. Although there is no standing water, the soils remain reduced and poorly drained.

much of the area was more aggressively farmed under a system of tenancy and fields were opened which were only of marginal productivity. There are a number of fields along Tannenbaum Road, including the substation lot, which take advantage of the excessively drained soils on the ridge adjacent to the low troughs.

Prehistoric and Historic Synthesis

The Prehistoric

The Paleo-Indian period, lasting from 12,000 to 8,000 B.C., is evidenced by basally thinned, side-notched projectile points; fluted, lanceolate projectile points, side scrapers, end scrapers; and drills (Coe 1964; Michie 1977; Williams 1968). The Paleo-Indian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented towards the exploitation of now extinct mega-fauna" (Michie 1977:124).

Unfortunately, little is known about Paleo-Indian subsistence strategies, settlement systems, or social organization. Generally, archaeologists agree that the Paleo-Indian groups were at a band level of society (see Service 1966), were nomadic, and were both hunters and foragers. While population density, based on the isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

The Archaic period, which dates from 8000 to 2000 B.C., does not form a sharp break with the Paleo-Indian period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited mammal. The chronology established by Coe (1964) for the North Carolina Piedmont may be applied with little modification to the South Carolina coastal plain and piedmont. Archaic period assemblages, exemplified by corner-notched and broad-stem projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

In the Coastal Plain of the South Carolina there is an increase in the quantity of Early Archaic

Figure 5. View of the substation lot, previously a cultivated field, looking east from the west edge.

remains, probably associated with an increase in population and associated increase in the intensity of occupation. While Hardaway and Dalton points are typically found as isolated specimens along riverine environments, remains from the following Palmer phase are not only more common, but are also found in both riverine and interriverine settings. Kirks are likewise common in the coastal plain (Goodyear et al. 1979).

The two primary Middle Archaic phases found in the coastal plain are the Morrow Mountain and Guilford (the Stanly and Halifax complexes identified by Coe are rarely encountered). Our best information on the Middle Woodland comes from sites investigated west of the Appalachian Mountains, such as the work in the Little Tennessee River Valley. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's Middle Archaic "Old Quartz Industry" of Georgia and South Carolina, where axes, choppers, and ground and polished stone tools are very rare.

The Late Archaic is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). These people continued the intensive exploitation of the uplands much like earlier Archaic groups. The bulk of our data for this period, however, comes from work in the Uwharrie region of North Carolina.

The Woodland period begins by definition with the introduction of fired clay pottery about 2000 B.C. along the South Carolina coast (the introduction of pottery, and hence the beginning of the Woodland period, occurs much later in the Piedmont of South Carolina). It should be noted that many researchers call the period from about 2500 to 1000 B.C. the Late Archaic because of a perceived continuation of the Archaic lifestyle in spite of the manufacture of pottery. Regardless of terminology, the period from 2500 to 1000 B.C. is well documented on the South Carolina coast and is characterized by Stallings (fiber-tempered) pottery (see Figure 6 for a synopsis of Woodland phases and pottery designations). The subsistence economy during this early period was based primarily on deer hunting and fishing, with supplemental inclusions of small mammals, birds, reptiles, and shellfish.

Like the Stallings settlement pattern, Thom's Creek sites are found in a variety of environmental zones and take on several forms. Thom's Creek sites are found throughout the South Carolina Coastal Zone, Coastal Plain, and up to the Fall Line. The sites are

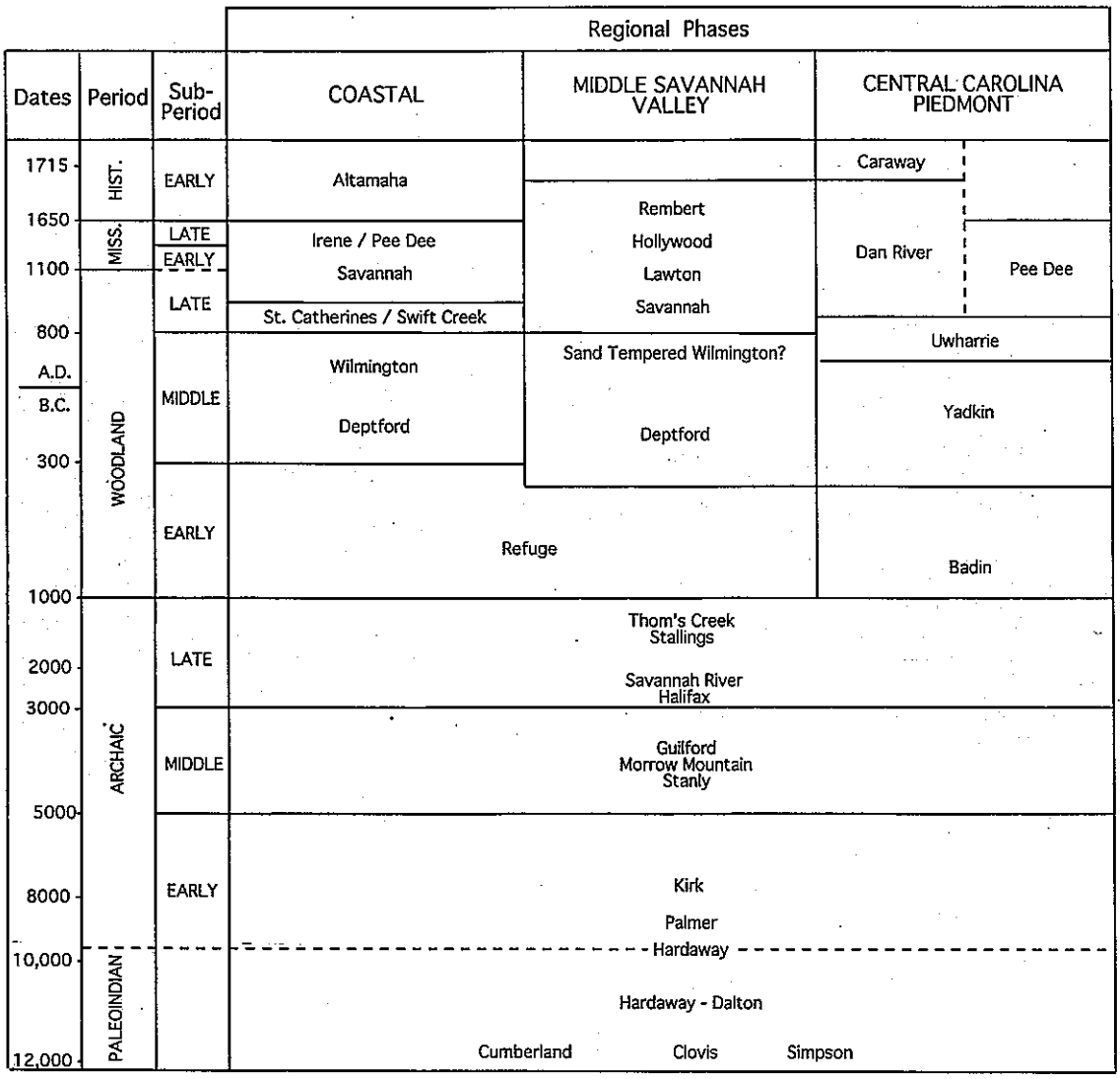

Figure 6. Cultural periods along the coast of South Carolina.

found into the North Carolina Coastal Plain, but do not appear to extend southward into Georgia.

In the Coastal Plain drainage of the Savannah River there is a change of settlement, and probably subsistence, away from the riverine focus found in the Stallings Phase (Hanson 1982:13; Stoltman 1974:235-236). Thom's Creek sites are more commonly found in the upland areas and lack evidence of intensive shellfish collection. In the Coastal Zone large, irregular shell middens, small, sparse shell middens; and large "shell rings" are found in the Thom's Creek settlement system.

The Deptford phase, which dates from 1100 B.C. to A.D. 600, is best characterized by fine to coarse sandy paste pottery with a check stamped surface treatment. The Deptford settlement pattern involves both coastal and inland sites.

Inland, sites such as 38AK228-W, 38LX5, 38RD60, and 38BM40 indicate the presence of an extensive Deptford occupation on the Fall Line and the Coastal Plain, although sandy, acidic soils preclude statements on the subsistence base (Anderson 1979; Ryan 1972; Trinkley 1980b). These interior or upland Deptford sites, however, are strongly associated with the swamp terrace edge, and this environment is productive not only in nut masts, but also in large mammals such as deer. Perhaps the best data concerning Deptford "base camps" comes from the Lewis-West site (38AK228-W), where evidence of abundant food remains, storage pit features, elaborate material culture, mortuary behavior, and craft specialization has been reported (Sassaman et al. 1990:96-98).

Throughout much of the Coastal Zone and Coastal Plain north of Charleston, a somewhat different cultural manifestation is observed, related to the "Northern Tradition" (e.g., Caldwell 1958). This recently identified assemblage has been termed Deep Creek and was first identified from northern North Carolina sites (Phelps 1983). The Deep Creek assemblage is characterized by pottery with medium to coarse sand inclusions and surface treatments of cord marking, fabric impressing, simple stamping, and net impressing. Much of this material has been previously designated as the Middle Woodland "Cape Fear" pottery originally typed by South (1976). The Deep Creek wares date from about 1000 B.C. to A.D. 1 in North Carolina, but may date later in South Carolina. The Deep Creek settlement and subsistence systems are poorly known, but appear to be very similar to those identified with the Deptford phase.

The Deep Creek assemblage strongly resembles Deptford both typologically and temporally. It appears this northern tradition of cord and fabric impressions was introduced and gradually accepted by indigenous South Carolina populations. During this time some groups continued making only the older carved paddle-stamped pottery, while others mixed the two styles, and still others (and later all) made exclusively cord and fabric stamped wares.

The Middle Woodland in South Carolina is characterized by a pattern of settlement mobility and short-term occupation. On the southern coast it is associated with the Wilmington phase, while on the northern coast it is recognized by the presence of Hanover, McClellanville or Santee, and Mount Pleasant assemblages. The best data concerning Middle Woodland Coastal Zone assemblages comes from Phelps' (1983:32-33) work in North Carolina. Associated items include a small variety of the Roanoke Large Triangular points (Coe 1964:110-111), sandstone abraders, shell pendants, polished stone gorgets, celts, and woven marsh mats. Significantly, both primary inhumations and cremations are found.

On the Coastal Plain of South Carolina, researchers are finding evidence of a Middle Woodland Yadkin assemblage, best known from Coe's work at the Doerschuk site in North Carolina (Coe 1964:25-26). Yadkin pottery is characterized by a crushed quartz temper and cord marked, fabric impressed, and linear check stamped surface treatments. The Yadkin ceramics are associated with medium-sized triangular points, although Oliver (1981) suggests that a continuation of the Piedmont Stemmed Tradition to at least A.D. 300 coexisted with this Triangular Tradition. The Yadkin series in South Carolina was first observed by Ward (1978, 1983) from the White's Creek drainage in Marlboro County, South Carolina. Since then, a large Yadkin village has been identified by DePratter at the Dunlap site (38DA66) in Darlington County, South

Carolina (Chester DePratter, personal communication 1985) and Blanton et al. (1986) have excavated a small Yadkin site (38SU83) in Sumter County, South Carolina. Research at 38FL249 on the Roche Carolina tract in northern Florence County revealed an assemblage including Badin, Yadkin, and Wilmington wares (Trinkley et al. 1993:85-102). Anderson et al. (1982:299-302) offer additional typological assessments of the Yadkin wares in South Carolina.

Over the years the suggestion that Cape Fear might be replaced by such types as Deep Creek and Mount Pleasant has raised considerable controversy. Taylor, for example, rejects the use of the North Carolina types in favor of those developed by Anderson et al. (1982) from their work at Mattassee Lake in Berkeley County (Taylor 1984:80). Cable (1991) is even less generous in his denouncement of ceramic constructs developed nearly a decade ago, also favoring adoption of the Mattassee Lake typology and chronology. This construct, recognizing five phases (Deptford I - III, McClellanville, and Santee I), uses a type variety system.

Regardless of terminology, these Middle Woodland Coastal Plain and Coastal Zone phases continue the Early Woodland Deptford pattern of mobility. While sites are found all along the coast and inland to the Fall Line, shell midden sites evidence sparse shell and artifacts. Gone are the abundant shell tools, worked bone items, and clay balls. Recent investigations at Coastal Zone sites such as 38BU747 and 38BU1214, however, have provided some evidence of worked bone and shell items at Deptford phase middens (see Trinkley 1990).

In many respects the South Carolina Late Woodland may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the previous 500 to 700 years (cf. Sassaman et al. 1990:14-15). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971).

The South Appalachian Mississippian Period (ca. A.D. 1100 to 1640) is the most elaborate level of culture attained by the native inhabitants and is followed by cultural disintegration brought about largely by European disease. The period is characterized by complicated stamped pottery, complex social organization, agriculture, and the construction of temple mounds and ceremonial centers. The earliest phases include the Savannah and Pee Dee (A.D. 1200 to 1550).

Historic Overview

The English established the first permanent settlement in what is today South Carolina in 1670 on the west bank of the Ashley River. Like other European powers, the English were lured to the New World for reasons other than the acquisition of land and promotion of agriculture. The Lord Proprietors, who owned the colony until 1719-1720, intended to discover a staple crop whose marketing would provide great wealth through the mercantile system.

By 1680 the settlers of Albemarle Point had moved their village across the bay to the tip of the peninsula formed by the Ashley and Cooper rivers. This new settlement at Oyster Point would become modern-day Charleston. The move provided not only a more healthful climate and an area of better defense, but:

> [t]he cituation of this Town is so convenient for public Commerce that it rather seems to be the design of some skillful Artist than the accidental position of nature (Mathews 1954:153).

While the Indian trade was profitable to many of the Carolina colonists, it did not provide the proprietors with the wealth they were expecting from the new colony. Early agricultural experiments which involved olives, grapes, silkworms, and oranges were less than successful. Consequently, the cultivation of cotton, rice, tobacco, and flax were stressed as these were staple crops whose marketing the proprietors could easily monopolize.

In 1696, further up the Ashley River, a grant

of 1,800 acres on a peninsula of high land located between the Ashley River and the Boo-shqo-ee Creek (now Dorchester Creek, and also referred to as Boshoo or Boshoe Creek) was obtained by Massachusetts Congregationalists, and the town of Dorchester was established (Carrillo 1973:5). Dorchester, located at the navigable head of the Ashley River became a center for trade and the distribution of goods (Walker 1941:50). Trade between local farmers, artisans, and merchants, and a lucrative deerskin trade comprised Dorchester's economy (Beck 1998:2). Naval stores, such as tar, pitch, and lumber were also exported from Dorchester.

The Congregationalist church obtained 2,250 additional acres between 1699 and 1700, making the total acreage associated with the Congregationalist Church 4,050 acres (Smith 1905:70-72). Diaries belonging to elders of the church show that not all original occupants of the Dorchester settlement were associated with the Congregationalists, with "others that were concerned" also drawing lots for land divisions in the settlement along with church members (Smith 1905:72). Land was set aside in Dorchester for a "place of trade," a public square and streets, and a "commons" (Smith 1905:72-73). The space where the creek enters the river was also set aside for public use, and an additional 123 acres north of the town along Boshoe Creek was set aside for mill purposes.

Construction of a permanent brick church, called the "White Meeting House" was begun sometime after 1700. During this time, the town began to grow and soon a number of merchants had established themselves in Dorchester town (Smith 1905:79). New settlers to Dorchester received grants higher up and across the Ashley River. In 1706, the Act for the establishment of the Church of England in the Province was passed, resulting in the creation of six parishes, including St. Andrew's Parish, to which Dorchester belonged. By 1708, the town contained about 350 people.

In 1719, St. Andrew's Parish was divided and Dorchester became part of the St. George Parish, with 115 English families, including 500 persons and 1,300 slaves, living in the town (Smith 1905:80). Estate inventories show that both Anglicans and dissenters in Dorchester owned slaves (Beck 1998:2). According to an advertisement in the *South Carolina Gazette*, more than 300 African slaves from Angola were brought to Dorchester to be sold in order to avoid a smallpox epidemic in Charleston (Beck 1998:2).

Rice soon became more profitable than earlier crops in Dorchester, increasing the wealth of planters (Beck 1998:3), and encouraging the large scale introduction of slavery. Although introduced at least by the 1690s, rice did not become a significant staple crop until the early eighteenth century. At that time it not only provided the proprietors with an economic base the mercantile system required, but it was also to form the basis of South Carolina's plantation system (Carpenter 1973). The majority of the slaves owned in Dorchester were concentrated in the surrounding plantations, with fewer slaves owned by merchants and artisans in the township (Beck 1998:3). Many plantations sprang up along the Ashley River, including Middleton Place, Archdale, Chatsworth, Spring Farm and Cedar Grove (Walker 1941:23).

In 1719, a Statute for constructing a Church of England was enacted, and 150 acres were purchased for the church grounds. By 1734, the church repairs and the construction of a parsonage house were undertaken. The town's growth also enabled the construction of roads into the surrounding country and bridges over the Ashley River. Other Acts, in 1723 and 1734, were passed for establishing a fair and markets, and founding a free school. However, the school and housing for the school's master were not constructed until 1758.

Between 1752 and 1756, overcrowding within Dorchester and concerns over the unhealthiness of the area led the Congregationalists to move to Georgia, without a marked decrease to Dorchester's importance as a locus of trade and distribution. The exodus of the entire congregation however, meant that the "White Meeting House" church was no longer used for church services, and sat vacant until later in the century (Smith 1905:92).

During this time, Dorchester was also affected, though not directly, by the increased hostilities in the country associated with the French and Indian Wars.

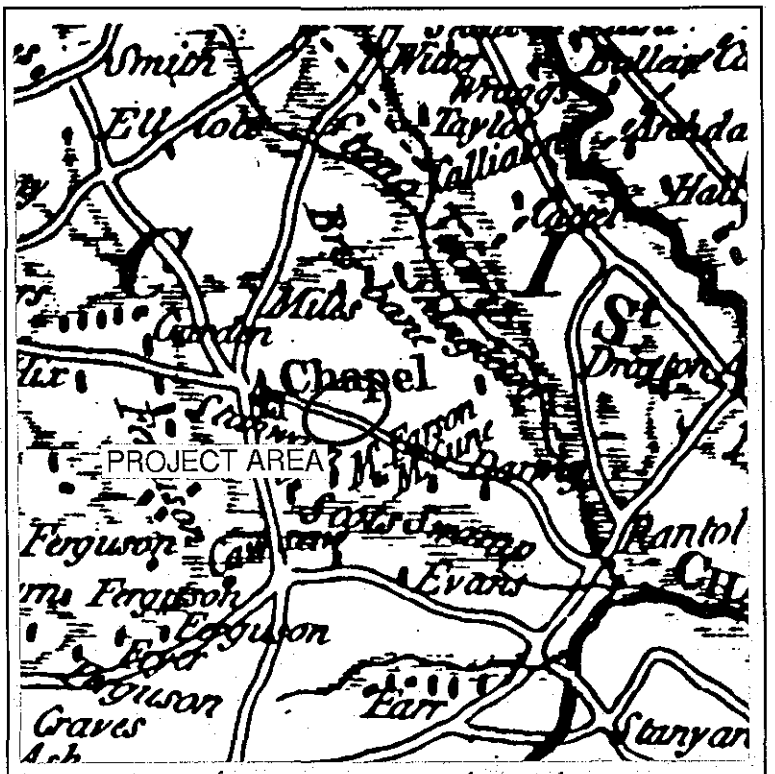

Figure 7. Portion of Mouzon's 1775 map showing the project area.

Preparations took place in the state to develop fortifications and additions to existing coastal defense works at Port Royal, Winyaw, Fort Johnson, and Dorchester (Carrillo 1973:7). A magazine and wall at Dorchester began construction in the late 1750's, with construction ceasing after 1760, most likely due to the decline of anxiety and tension in this area. The tabby fort built to assuage fears of attacks from Native Americans is still standing at the Old Dorchester State Historic Site on the high bank of the Ashley River (Beck 1998:1). The fort was constructed on the north side of the Ashley river in an area that comprised the extreme southern portion of the town of Dorchester. Carrillo (1973:13) describes the tabby fort as a "flanked redoubt" which "resembles a pin wheel having four straight or slightly angling sides" (Carrillo 1973:13).

South Carolina's economic development during the pre-Revolutionary War period involved a complex web of interactions between slaves, planters, and merchants. By 1710 slaves outnumbered free people in South Carolina and by the 1730s slaves were beginning to be concentrated on a few, large slave-holding plantations. By the close of the eighteenth century some South Carolina plantations had a ratio of slaves to whites that was 27:1 (Morgan 1977).

With the onset of the Revolutionary War, Dorchester was named as a possible armed post and by December 9, 1775, the Council of Safety of the Second Provincial Congress issued an order for manning the post with troops and militia (Carrillo 1973:10). Mouzon's 1775 map (Figure 7) shows the vicinity of St. Paul's, including the road from Parkers Ferry to Rantol [Rantowles] Bridge. There are no plantations shown in the project area, although there were a number in the region, with settlements largely focused on the edges of major swamp drainages.

With American forces defending Charleston, Dorchester was occupied twice by the British in 1780 and 1781. Dorchester was sacked and burned on December 1, 1781 when the British learned of an impending attack and retreated to Charleston (Carrillo 1973:10). Charleston itself was occupied by the British for over 2½ years between 1780 and 1782.

After the Revolution, loss of royal bounties on rice, indigo, and naval stores caused considerable economic chaos with the eventual "restructuring of the state's agricultural and commercial base" (Brockington et al. 1985:34). One means of "restructuring" was the emergence of cotton as the principal cash crop. Although "upland" cotton was available as early as 1733, its ascendancy was ensured by the industrial revolution, the invention of the cotton gin in 1794, and the availability of slave labor. While "Sea Island" cotton was already being efficiently cleaned, the spread of cotton was primarily in the South Carolina interior. Consequently, Charleston benefitted primarily through its role as a commercial center.

Within five years of the Revolutionary War, Dorchester decayed rapidly (Smith 1905:86).

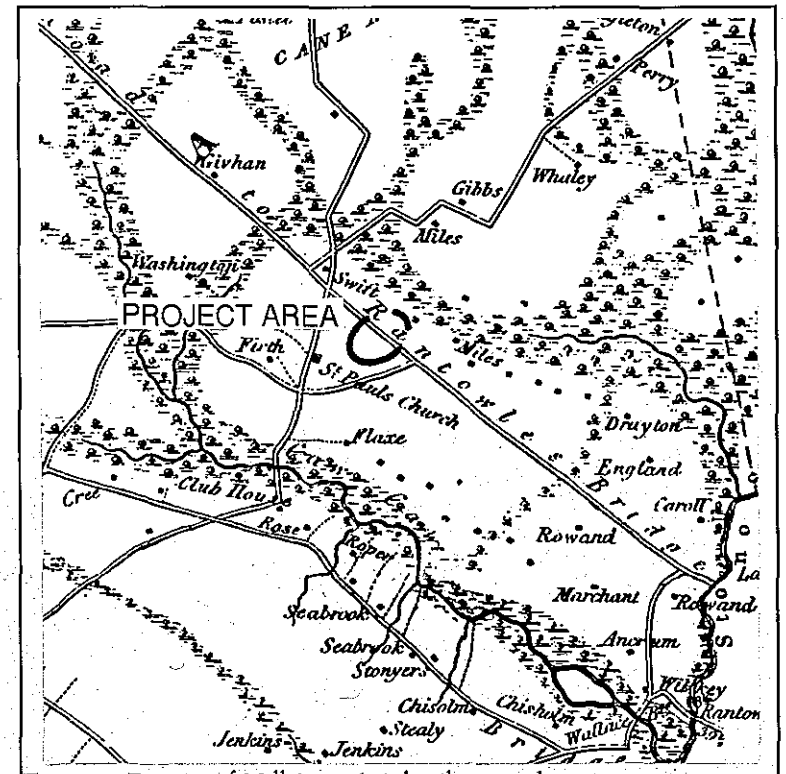

Figure 8. Portion of Mills' 1826 *Atlas* showing the project area.

According to Smith, this decline was due to several factors including the growth of the middle and upper country and the extension of the frontier, the development increased use of roads, the town's unsuitability for summer resorts for nearby planters, the planters' reliance on Charles Town for business needs rather than Dorchester, and the infertile land surrounding Dorchester (Smith 1905:85). The demise of Dorchester was facilitated by the growth of the town of Summerville by planters from the area who built houses and summer settlements there.

By 1832, Summerville had grown to the extent that the area was referred to as an "Old Summerville" and a "New Summerville" when the SC Canal and Railroad Company began building a railroad line (Walker 1941:78). Growth continued in the general area, prompting the creation of new counties. In 1800, Colleton County was formed from parts of Charleston County. *Mills' Atlas* from 1825 places the project area in Colleton County (Figure 8). County Line Road ran between Parkers Ferry (on the Edisto to the west) and Rantowles Creek (sometimes called Stono Creek to the east). Settlement in this area focused on the major creeks and rivers, although there were also more inland planters taking advantage of the rice growing potential of the inland swamps.

Cotton provided about 20 years of economic success for South Carolina. During this period South Carolina monopolized cotton production with a number of planters growing wealthy (Mason 1976). The price of cotton fell in 1819 and remained low through the 1820s, primarily because of competition from planters in Alabama and Mississippi. Friedlander, in Wheaton et al. (1983:28-29) notes that cotton production in the inland coastal parishes fell by 25% in the years from 1821 to 1839, although national production increased by 123%. Production improved dramatically in the 1840s in spite of depressed prices and in the 1850s the price of cotton rose.

By the mid-nineteenth century most of the plantations along the Ashley River had fallen into disrepair. Edmund Ruffin described the scene in 1843:

> . . . the river banks offer many beautiful sites for residences, which were preferred as such by the early settlers, & for a long time the Ashley River plantations were the most highly appreciated and productive lands in the colony. Now these lands are almost left untilled, are rarely inhabited by the proprietors . . . & the whole presents a melancholy scene of abandonment, desolation & ruin. . . . But little rice is made, & only by a few persons. One occupant only on the left bank cultivates cotton for sale. . . . The principal business now pursued is cutting wood to sell in Charleston (Mathew 1992:78).

After years of cultivation without benefit of fertilizers, the Ashley River lands were largely unfit for cultivation and had been abandoned to timber.

The situation did not change for the better after the Civil War. The land was still exhausted and offered little chance of a productive return, and in addition agricultural labor was in short supply and was often "unreliable" according to former plantation owners. Gradually there was a shift to a new extractive industry — phosphate mining.

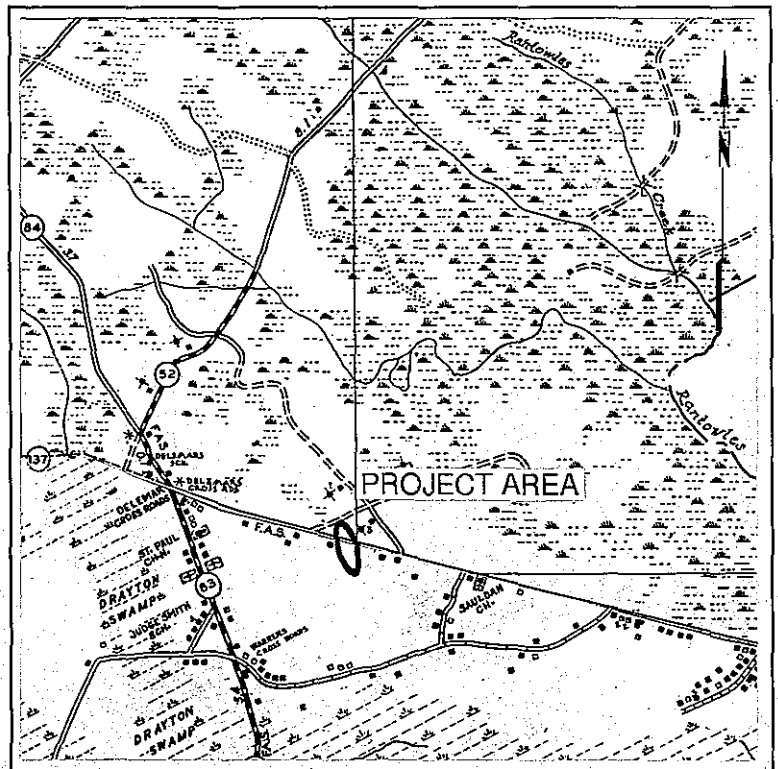

Figure 9. Matched portions of the 1942 Charleston and 1939 Dorchester *General Highway and Transportation Maps* showing the project area.

Phosphate rock in South Carolina was recognized by chemists and geologists at least as early as 1797, although its economic importance was ignored, blunted prior to the Civil War, as one observer explained, by "a state of agricultural prosperity" (Guerard 1884:1). In fact, it was only when the economy of the low country lay in ruins that phosphate was explored. As Shick and Doyle argue, phosphate mining allowed, "the upper class of planters and factors in the Charleston area . . . to shore up a . . . replica of the social order that they had defended in the late war" (Shick and Doyle 1985:31). Just as to the point, they argue:

> in the grand mansions of the city the upper class of old families continued to hold sway despite some disturbing signs of genteel poverty in flaking paint and pawned silver. The older leaders of this "ancient city" developed a fiercely conservative resistance to things new and came to see the lack of growth as a blessing that allowed them to preserve a special heritage with its roots in the old order of antebellum times (Shick and Doyle 1985:30).

Phosphate allowed economic activity, but without any real growth. It allowed the blacks to be engaged in productive activity, but without allowing any real freedom. And, like rice and cotton before it, phosphate was predestined to destroy the land and result in eventual economic collapse.

Phosphate, used as fertilizer, was found as deposits in beds or strata of rough nodules "from part of an inch to several feet in diameter," often associated with fossil bones. The strata were typically 6 to 20 inches in depth and were found up to 8 feet below the modern ground surface. The nodules were also found in creeks and, according to Guerard, "on the low lands which form a belt of country running parallel to the Atlantic and from 10 to 50 miles from the seaboard" (Guerard 1884:4).

In the post-war rush to find some new system to bolster the economy and put blacks back to work, none of the problems potentially associated with phosphates were considered significant. A number of

phosphate companies were organized to excavate the rock. The first company organized, in 1867, was the Charleston, S.C. Mining and Manufacturing Company, formed with $1 million in northern capital (when South Carolinians were unwilling to back the venture). Local Carolina companies, however, were quick to follow (Lewis and Hardesty 1979:19).

The phosphate industry in South Carolina eventually fell victim to forces much larger, and more powerful, than imagined by the investors — resembling the events associated with cotton and rice. The rapid decline in South Carolina was largely the result of new strikes in Florida during the 1880s, strikes in the 1890s in middle Tennessee, and eventually the discovery of deposits in Algiers. At the same time, internal problems such as political conflict (including exceptionally unsuccessful efforts by South Carolina to regulate the industry), natural disasters, and the decisive role of the northern capitalists, all contributed to the fall of the phosphate industry. Land mining of phosphate rock continued into the 1920s, but at a declining scale. Not even mergers such as the Virginia-Carolina Company's purchase of the S.C. Mining and Manufacturing Company with its infusion of $48 million in capital was able to keep the industry viable in South Carolina.

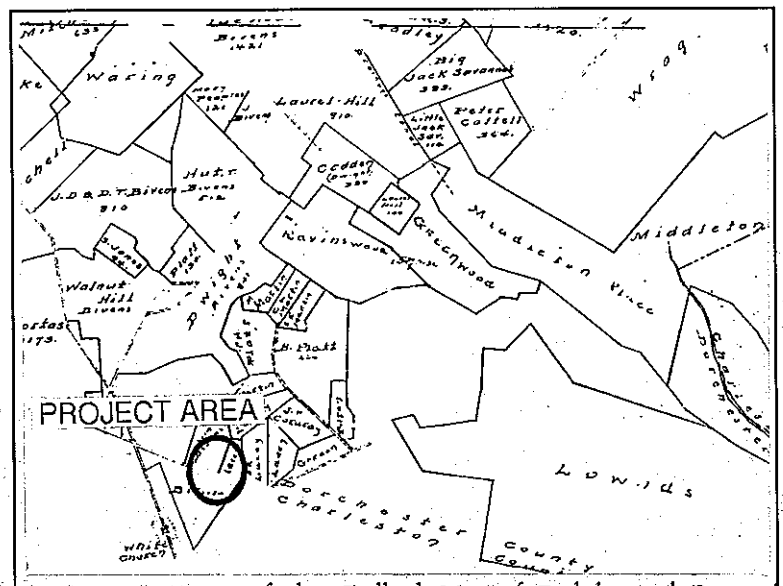

Figure 10. Portion of the Gaillard *Map of Berkeley and Parts of Charleston and Dorchester Counties, South Carolina* showing the project area.

By the 1930s the region was composed of generally small farms, often farmed using tenant labor. Figure 9 shows the period *General Highway and Transportation* maps for Charleston and Dorchester counties. There were a series of houses along County Line Road, with a few exhibiting associated tenants. Many, however, were small farmers engaged in subsistence cropping. The prevalence of small farms, many held simply as heirs lands is also suggested by Gaillard's *Map of Berkeley and Parts of Charleston and Dorchester Counties* which shows tracts between 1900 and 1962 (Figure 10).

METHODS AND RESULTS

Background Investigations

Prior to conducting this investigation we searched the State Historic Preservation Office GIS for any information on National Register buildings, districts, structures, sites, or objects in the study area, as well as the results of any structure surveys which may have been completed in the project areas. We found no identified National Register properties within a mile of the proposed project. Both Dorchester and Charleston have had comprehensive architectural and historical surveys. The Charleston survey, conducted between 1991-1992, identified one site in the defined 1-mile area of potential effects (APE) for this project. Site 3780724 is located at 6473 County Line Road and was determined not eligible by the survey (Fick 1992). The Dorchester County survey (Preservation Consultants 1997) identified no historic structures within the APE for the project.

We also contacted the S.C. Institute for Archaeology and Anthropology for information concerning any previously recorded archaeological sites in the immediate survey area. As previously discussed, there are a number of sites in the general area, but none within the immediate project area.

Field Methods

The initially proposed field techniques involved the placement of shovel tests at 100 foot intervals along the corridor from the existing transmission line northward to the substation lot. In areas of standing water or wetlands no shovel tests would be excavated. In the substation lot a series of north-south transects, spaced 100 feet apart would be set out, with shovel tests along each transect at 100-foot intervals. In addition, since the substation had very good surface visibility, a pedestrian survey would also be conducted, in an effort to locate any materials which might be found on the surface.

For the shovel tests, all soil would be screened through ¼ inch mesh, with each test numbered sequentially along numbered transects. Each test would measure about 1 foot square and would normally be taken to a depth of at least 1.0 feet. All cultural remains would be collected, except for shell, mortar, and brick, which would be quantitatively noted in the field and discarded. Notes would be maintained for profiles at any sites encountered.

Should sites (defined by the presence of two or more artifacts from either surface survey or shovel tests within a 25 feet area) be identified by shovel testing, further tests would be used to obtain data on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. These tests would be placed at 50 feet intervals in a simple cruciform pattern until negative shovel tests were encountered. The information required for completion of South Carolina Institute of Archaeology and Anthropology site forms would be collected and photographs would be taken, if warranted in the opinion of the field investigators.

This strategy was implemented with no significant modifications. The corridor from the existing transmission easement was clearly marked during the survey and a centerline was cut. As previously mentioned, the substation site was open and well marked.

Of the 14 proposed shovel tests on the tap line corridor only seven were excavated. The remaining tests were all located in areas of standing water primarily situated between County Line Road and the substation. To the south of County Line Road the soils revealed a black (10YR2/1) loam to a depth of about 0.9 foot overlying a dark gray (10YR4/1) sand excavated to a depth of 1.3 feet.

In the area of the substation a series of seven transects were established running essentially parallel to the property lines (rather than due north). A total of 31 shovel tests were excavated in the substation lot. As each transect was completed, the route about 50 feet to the east was walked back to the southern property boundary, allowing the entire substation to be examined.

The shovel tests in the substation revealed about 0.7 foot of brown (10YR5/3) sand overlying a very pale brown (10YR7/3) sand. Shovel tests in this area were excavated to depths of about 0.9 to 1.5 feet. In a few tests it appeared that subsoiling had pulled up pieces of an orange-red subsoil clay.

Although both Charleston and Dorchester counties have received recent, and thorough, comprehensive surveys, we drove the accessible public roads within a 1 mile APE looking for any structures which might be 50 years old. We also revisited the previously identified structure (site 378-0724).

Site Evaluation

Identified sites would be evaluated for further work based on the eligibility criteria for the National Register of Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead federal agency in consultation with the State Historic Preservation Officer at the South Carolina Department of Archives and History.

The criteria for eligibility to the National Register of Historic Places is described by 36CFR60.4, which states:

> the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and
>
> a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b. that are associated with the lives of persons significant in our past; or
>
> c. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> d. that have yielded, or may be likely to yield, information important in prehistory or history.

National Register Bulletin 36 (Townsend et al. 1993) provides an evaluative process that contains five steps for forming a clearly defined explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data sets or categories of archaeological information such as ceramics, lithics, subsistence remains, architectural remains, or sub-surface features;
- identification of the historic context applicable to the site, providing a framework for the evaluative process;
- identification of the important research questions the site might be able to address, given the data sets and the context;
- evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently

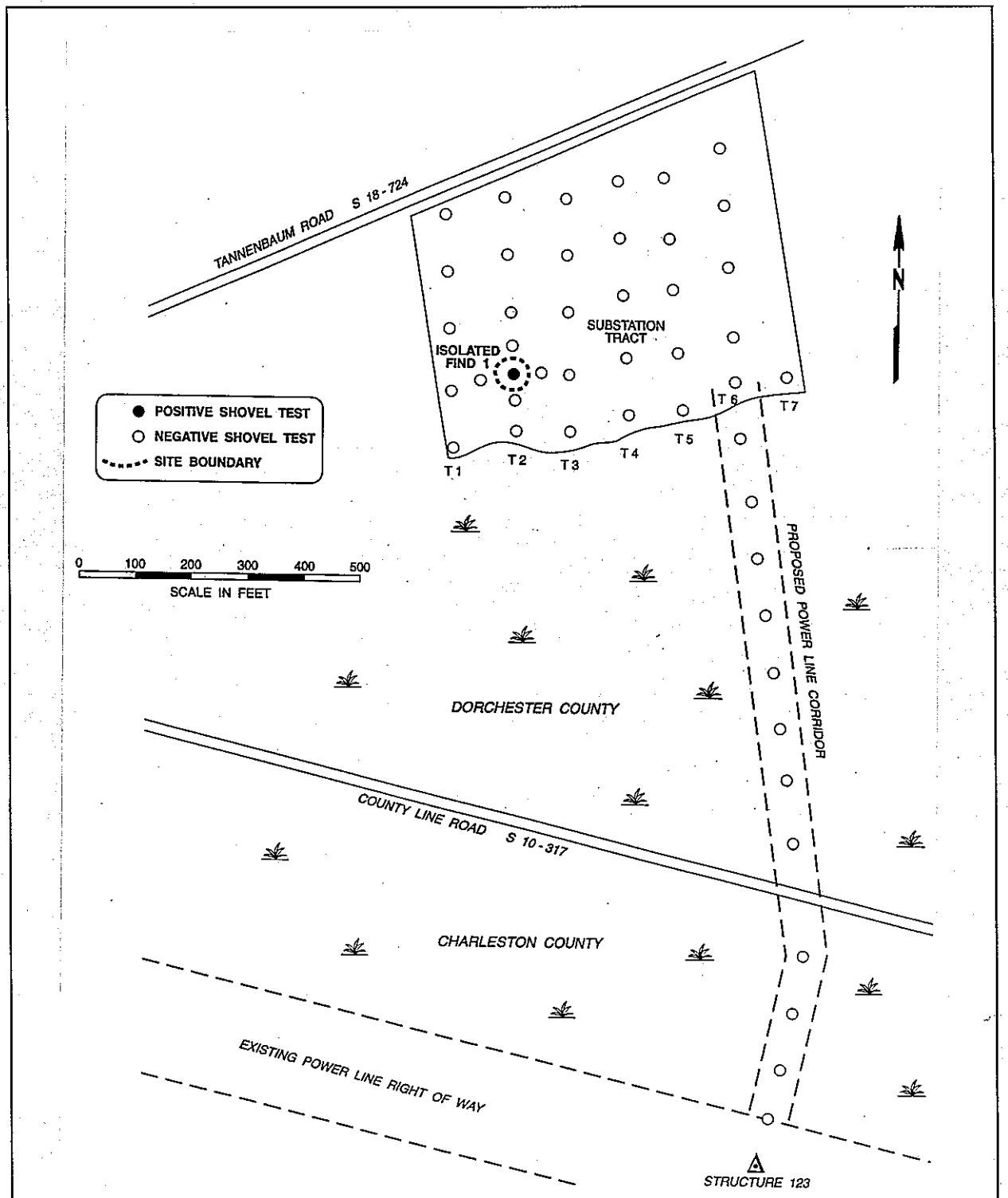

Figure 11. Map of the survey tract, showing approximate location of transects and shovel tests.

well preserved to address the research questions; and

- identification of important research questions among all of those which might be asked and answered at the site.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process must stand alone, with relatively little reference to other documentation and where typically only one site is being considered.

For architectural sites the evaluative process would be somewhat different. Given the relatively limited architectural data available for most of the properties, we would evaluate these sites primarily using National Register Criterion C, focusing on the site's "distinctive characteristics." Key to this concept is the issue of integrity. This means that the property needs to have retained, essentially intact, its physical identity from the historic period.

Particular attention would be given to the integrity of design, workmanship, and materials. Design includes the organization of space, proportion, scale, technology, ornamentation, and materials. As *National Register Bulletin* 36 observes, "Recognizability of a property, or the ability of a property to convey its significance, depends largely upon the degree to which the design of the property is intact" (Townsend et al. 1993:18). Workmanship is evidence of the artisan's labor and skill and can apply to either the entire property or to specific features of the property. Finally, materials — the physical items used on and in the property — are "of paramount importance under Criterion C" (Townsend et al. 1993:19). Integrity here is reflected by maintenance of the original material and avoidance of replacement materials.

Survey Results

Only one shovel test produced material. Shovel Test 2 on Transect 2 within the substation lot yielded a single fragment of undecorated whiteware. A series of four additional tests were placed at 50 foot intervals around this positive test, but no additional remains were encountered. The pedestrian survey also failed to identify additional items, in spite of the excellent surface visibility. This item is classified as an isolated find and was designed 38DR00. Such remains, lacking adequate data sets and integrity to support further research are recommended as not eligible for inclusion on the National Register. No additional management activities are necessary, pending concurrence by the State Historic Preservation Office.

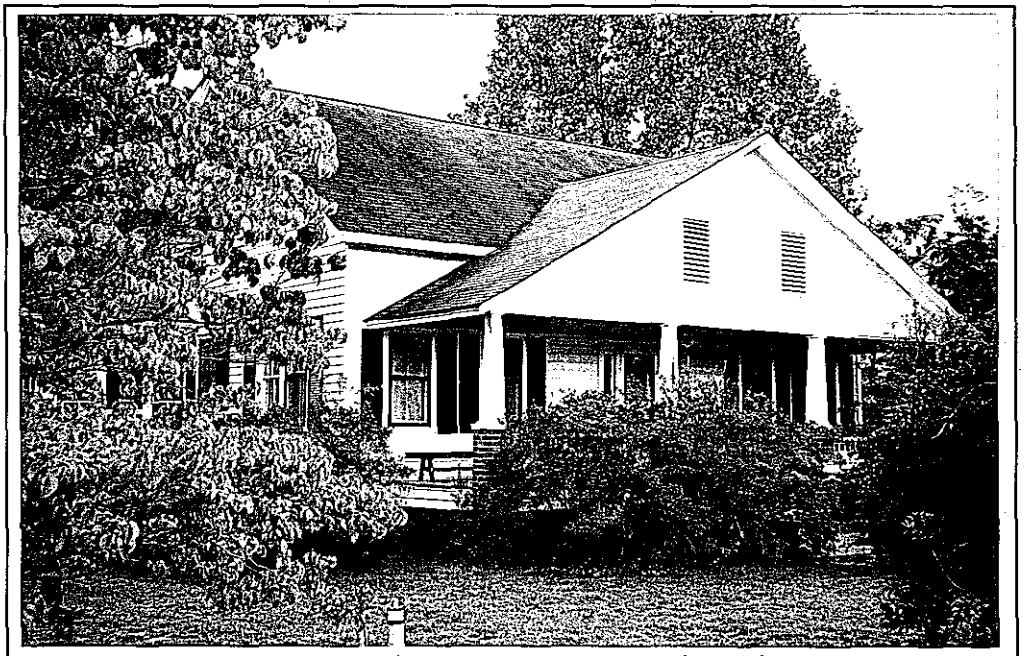

Figure 12. Structure 3780724 in Charleston County, view to the southwest.

The architectural survey failed to identify any structures not recorded by the previous studies. Previously identified 3780724, situated at 6473 County Line Road, was revisited (Figure 12). The structure is a lateral gabled house with a cross gable front porch across the full facade. The structure has synthetic siding and other alterations which have severely affected its integrity. We concur with the previous assessment that the structure is not eligible.

SUMMARY AND RECOMMENDATIONS

This study involved the examination of the 1,400 foot Ravenel tap line, 75-feet in width, and the associated 6 acre substation situated on Tannenbaum Road in Charleston and Dorchester counties. This work was conducted to assist Central Electric Power Cooperative comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

Examination of files at the S.C. Department of Archives and History revealed that only one structure, 3780724, had been previously identified. The ca. 1940 structure was determined not eligible based on a lack of integrity. The files at the S.C. Institute of Archaeology and Anthropology were also searched; no previously identified archaeological sites were found in the immediate project area.

The corridor was found to consist of poorly drained sand loams, with standing water encountered over about half of the 1,400 feet. Shovel tests at 100 foot intervals revealed dark, reduced soils and no archaeological remains. The substation was found to be situated in a somewhat higher and better drained area. Shovel tests were placed at 100 foot intervals on transects spaced every 100 feet. One test produced a single fragment of whiteware although additional tests in the immediate area failed to produce any other remains. This ceramic is classified as an isolated find and is recommended not eligible for inclusion on the National Register. No additional management actions are recommended pending the review and concurrence of the State Historic Preservation Office.

It is always possible that archaeological remains may be encountered in the project area during construction activities. As always, contractors should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office, or Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No further land altering activities should take place in the vicinity of these discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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